29th Australasian Association for Engineering Education
Annual Conference (AAEE 2018)

9-12 December 2018
THE UNIVERSITY OF WAIKATO, HAMILTON, NEW ZEALAND

www.aaee2018.com

Platinum Sponsor
ACKNOWLEDGMENTS

The Australian Association for Engineering Education and the Organising Committee thank all partnering and exhibiting companies for their support of the conference. All delegates are encouraged to spend time with the sponsors and exhibitor in the exhibition area, as without their valued support our association would be unable to provide a conference of this nature to our members.

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Speaker Partner - Professor Donna Riley

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CONTENTS

Health and Safety Information 4
Conference Welcome 7
General Information 8
Conference APP 11
Social Programme 12
Transport Schedule 13
Keynote Speakers 15
Conference Programme
  Monday 19
  Tuesday 24
  Wednesday 28
  Thursday 32
Exhibition Floor Plan 33
Sponsor and Exhibitor Listing 34
Sponsor and Exhibitor Catalogue 35
Venue Floor Plan 40

CONFERENCE ORGANISERS
ForumPoint2 Limited
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Amanda Wilson, Project Coordinator
E: amanda@fp2.co.nz
HEALTH AND SAFETY INFORMATION

The Conference Managers, ForumPoint2 Limited, in conjunction with the AAEE 2018 Organising Committee and venues are morally and legally responsible to provide a safe and healthy environment for all attendees at the Conference. This commitment extends to ensuring the AAEE 2018 Conference operations do not place the local community at risk of any injury, illness or property damage.

All measures within our ability will be undertaken to ensure attendees are as informed as possible about any potential risks or hazards they may face whilst attending Conference. All attendees will need to:

• Listen to the health and safety briefing onsite and/or read the health and safety document available from the registration desk
• Ensure all health and safety concerns; and all accidents or near misses are immediately reported to the registration desk.

All attendees are encouraged to be responsible for promoting a safe and healthy working environment for the entire Conference duration.

University of Waikato
First aid kit is located at the registration desk. A defibrillator is located in the Student Centre glass building directly opposite L and S Blocks.

In the event emergency medical assistance is required, please call 1-111 (Police, Fire Service or Ambulance) from emergency kiosks around the University or dial 111 from a mobile phone.

University Emergency Phone Number
Unisafe (Security) +64 7 838 4444 (from a mobile) OR 4444 from a phone inside the lecture theatres.

The nearest medical centre and pharmacy to conference is:

**Hillcrest Medical Centre**
8.30am – 5.00pm daily
Corner Cambridge Road and Masters Avenue, Hillcrest, Hamilton
T: +64 7 856 5087

**Hamilton Anglesea Accident and Emergency Clinic**
Open 24 hours
Gate 1 Corner Thackeray and Anglesea Street, Hamilton
T: +64 7 858 0800

**Fire and Emergency**
In the event of fire:
• On the discovery of fire, immediately activate an alarm and notify the ForumPoint2 team
• Upon hearing alarms, STOP WORK, evacuate immediately. Further instructions will be provided by the venue, please follow all directions
• Designated wardens will be on hand to guide you to the nearest emergency evacuation assembly area
• Proceed immediately to your nearest exit as instructed
• Await further instructions or clearance from the wardens for an orderly re-entry
• Fire hoses and fire alarm switches must remain visible and accessible to the public at all times
Earthquake Evacuation

- Remain inside the building
- Move away from any equipment, windows and large furniture
- Take immediate shelter under solid furniture such as tables or desks
- If an evacuation order is given, follow the fire evacuation procedures
- Keep calm and assist those around you

Accident Reporting

All accidents and incidents **must** be reported immediately to the registration desk or Paula Armstrong, ForumPoint2, +64 27 649 2081

Smoking

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CONFERENCE WELCOME

Tēnā kotou katoa.

Welcome to the 29th Annual Conference of the Australasian Association for Engineering Education (AAEE). On behalf of the organising committee, Janis and I would like to welcome you to Hamilton.

This conference focusses on the increasing diversity of students coming into our classrooms, whether it is due to gender, age, ethnicity or disability. This diversity is a recognition of how our society is changing. Society needs more engineers to solve the problems that society is often creating or exacerbating. It also needs novel solutions and idea for new products and services. These challenges can be met by nurturing and supporting new ideas and creative approaches. We, as Engineering Educators, will have to work with this diversity to produce the next generation of engineering graduates.

We hope this conference will give you a platform to explore some of these ideas that will support and encourage diversity. It will be challenging and thought provoking, but we know you will take something away with you that will allow you to develop and support the new engineering graduates coming through your programmes.

Ngā mihi

Professor Janis Swan Dr Trudy Harris
The University of Waikato Wintec
GENERAL INFORMATION

Conference Registration Desk
The Conference registration desk is staffed by the ForumPoint2 team. If you have any questions regarding Conference or require local information, please do not hesitate to see any of the team. The registration desk will open from 4.30pm on Sunday 9 December at Wintec and from 8.00am on Monday 10 December at the University of Waikato where it will remain open for the duration of the conference.

Useful Telephone Numbers
Paula Armstrong, ForumPoint2 +64 27 649 2081
Novotel Tainui Hamilton +64 7 838 1366
IBIS Tainui Hamilton +64 7 859 9200
College Hall: The University of Waikato +64 7 838 4400
Hamilton Taxi 0800 477 477 or +64 7 847 7477
Red Cabs +64 7 839 3939

Industry Exhibition
AAEE 2018 thank all sponsoring and exhibiting companies for their support of the Conference. All delegates are encouraged to spend time with the sponsors and exhibitors in the exhibition area, as without their valued support the association would be unable to provide a conference of this nature.

Name Badges
Name badges will be given to all Conference delegates and industry representatives when they present at registration. Your name badge is your official entrance pass to Conference sessions, daily Conference catering and the Welcome Function, and is a health and safety requirement, therefore we request you wear these at all times.

We offer the opportunity to return your name badge to the registration desk at the end of Conference for recycling.

Catering During Conference
Daily catering during Conference will be served in the exhibition area level 1, S Block foyer.

Special Requirements
If you have advised us of a special dietary requirement at the time of completing your registration form, these will have been notified to the Conference caterers and an alternative option will be available for you. We ask that you please make yourself known to the catering staff. If you have any concerns, contact the team at the Conference registration desk.

Water Station
Water bottle refilling will be available in the exhibition/catering area.

Mobile Phones
During Conference sessions, we ask that mobile phones are turned off or switched to silent, and are not used when sessions are in progress.
**Internet Access**
Complimentary internet access is available within the Conference and exhibition area. Details will be provided at the registration desk.

**Smoking**
The University of Waikato is a smoke-free campus.

**Parking**
Parking closest to S Block at the University is via Gate 1, off Knighton Road, Hamilton.

Parking charges of $2.00 per day (including GST) apply on campus Monday to Friday, 8.30am to 4.30pm. You cannot park in the numbered/named parks as they are reserved parks for permit holders (clamping fees apply). General parking outside of these hours is free.

How to pay for onsite parking
- Go to the nearest silver payment machine
- Enter your license plate number
- Select the tariff option that applies to you (day, week, semester)
- Select payment method; Eftpos or coin
- A receipt is available on request
- You do not need to display this on your dashboard (your license plate number in the system is proof of payment)

If you are staying at College Hall, parking will be via Gate 3B off Silverdale Road and is also $2.00 per day excluding weekends.

**Mobility Parking**
Two accessibility car parks are available at the turnaround via Gate 1, Knighton Road.

**Accommodation**
If you have secured accommodation at College Hall, conveniently located on the grounds of the University of Waikato, please note the following:

- College Hall office is open Monday to Friday 8.30am – 4.30pm
- College Hall location is via Gate 4, Hillcrest Road, past the Marae and head for the reception area (parking at Gate 3B, off Silverdale Road)
- If checking in afterhours, please use the telephone located in the College Hall Reception to call for assistance. Contact number are provided by the phone
- Daily breakfast is served between 7.00am and 8.00am in the College Hall dining room, catering is only available for those staying at College Hall.

For all other accommodation options, standard check-in is 2.00pm onwards and check-out time is 10.00am. Please ensure all incidental accounts are settled directly with your hotel, in full, prior to your departure. AAEE 2018 and ForumPoint2 are not responsible for any unpaid accounts. Please note, hotels may levy a surcharge on credit card payments.

**Evaluation**
An online evaluation survey will be emailed to attendees after Conference. We welcome your feedback and would be grateful for a few minutes of your time to complete this.
Insurance
Registration fees do not include personal, travel or health insurance of any kind. Neither AAEE 2018 nor ForumPoint2 take any responsibility for delegates failing to take out adequate insurance cover.

Session Information
Instructions for Presenters of Papers
Presentations must be loaded at least one hour prior to the start of the session you are presenting in. A helper will be in the room in the break times to assist with the loading of your presentation, please ensure you check your loaded presentation. Presentations should be supplied on a USB stick in PowerPoint format. The use of the author’s computer will not be allowed, in order for sessions to run smoothly.

Authors are kindly requested to meet their Session co-chairs in the session room 10 minutes prior to the start of the session they are presenting in to check-in and provide the Chairs with a short (50 word maximum) printed biography.

Additional Instructions for Session Chairs
Presentations are run from a centrally controlled presentation system in each room. Please be in the room at least 10 minutes prior to the start of your session to ensure all presentations have been checked and loaded.

The length of paper presentations are restricted to 10 minutes. Discussion will be held at the end of the session. Session Chairs are kindly asked to closely monitor timing against the scheduled programme. In case of “no show”, the session must be either suspended until the time of the next paper or closed if there are no more papers in the session.

Disclaimer of Liability
Whilst we have endeavored to ensure information on the Conference website and printed material is accurate, details may be subject to change without notice. Any corrections or amendments will be notified as soon as possible. In the event of industrial disruptions, or service provider failures, AAEE 2018 and ForumPoint2 will not accept any responsibility for losses incurred by delegates.

Acceptance of oral papers does not indicate endorsement by the conference committee of any product or activity the session may promote.
CONFERENCE MOBILE APP

All the information you need to enjoy the 2018 Conference can be found within the Conference APP. The full speaker and social programme, sponsors and exhibitor listings and general information all at your fingertips.

1. Go to the App Store for iPhones, or Play Store for Androids (you will need either an Apple ID or Play Store account)
2. Search The Event App by Events Air and download the app
3. Enter the event code: AAEE2018 and press submit
4. To log in, please refer to your email or visit the registration desk for your username and pin
5. The app is now ready!

If you have any difficulties see the team at the Conference registration desk
SOCIAL PROGRAMME

Pōwhiri and Welcome Function
Venue: Wintec Rotokauri Campus
Date: Sunday 9 December
Time: 5.00pm – 7.30pm
Transport: Return coach transport departs from College Hall and the Novotel Tainui at 4.15pm and then back to College Hall and Novotel Tainui at 7.30pm.
Dress: Smart casual, we request a minimum of tidy jeans and no singlets

Join us for a traditional Māori welcome, facilitated by the Wintec kaumatua. Followed by a relaxed evening of networking over canapes and beverages. These formalities are a great way to kick off the conference and a great opportunity to catch up with old friends and meet new ones.

Conference Dinner
Venue: Hobbiton Movie Set, Matamata, Waikato
Date: Tuesday 11 December
Time: 4.45pm – 11.00pm
Transport: Return coach transport departs promptly from the University of Waikato at 4.45pm and back to the University/College Hall and the Novotel Tainui after dinner, at 10.00pm, 10.30pm and last coach at 11.00pm.
Dress: In theme or smart / casual - We strongly advise wearing good walking shoes for the Hobbiton tour and bringing a jacket as the evenings are cool and the venue provides a combination of marquee dining and indoor bar.

The AAEE 2018 Conference Dinner will be held at the world famous Hobbiton Movie Set at Matamata, approximately a 45 minute drive from Hamilton. On arrival at Hobbiton you will be taken on a tour of the movie set and receive a complimentary drink.

Important
Buses will depart at 4.45pm for Hobbiton from the University only. All guests must be at the bus stop through Gate 1 on Knighton Road, 10 minutes prior to this time. Please ensure you bring a warm jacket with you on Tuesday morning – you will not have the opportunity to return to your hotel prior to departing for Hobbiton.

There will be an opportunity to visit the gift shop at Hobbiton prior to entry. Please bring your wallet for some last minute shopping.
Daily transport to the University of Waikato is by your own arrangement.

<table>
<thead>
<tr>
<th>Date</th>
<th>Pick up time</th>
<th>To arrive at venue by</th>
<th>From</th>
<th>To</th>
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<tbody>
<tr>
<td><strong>Sunday 9 December</strong></td>
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<tr>
<td><strong>Welcome Function</strong></td>
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<tr>
<td>Delegates depart Host Hotels for Wintec - Rotokauri Campus</td>
<td>4.15pm</td>
<td>4.40pm</td>
<td>Novotel Tainui Hamilton / Ibis Hamilton Victoria Street, in loading bay between Novotel and BNZ Bank</td>
<td>Wintec - Rotokauri Campus 51 Akoranga Rd, Hamilton</td>
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<tr>
<td><strong>Welcome Function</strong></td>
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<tr>
<td>Delegates depart College Hall, University of Waikato for Wintec - Rotokauri Campus</td>
<td>4.15pm</td>
<td>4.40pm</td>
<td>College Hall, Gate 4, University of Waikato Hillcrest Road, Hamilton</td>
<td>Wintec - Rotokauri Campus 51 Akoranga Rd, Hamilton</td>
</tr>
<tr>
<td><strong>Departs Wintec to Novotel</strong></td>
<td>7.30pm</td>
<td>8.00pm</td>
<td>Wintec - Rotokauri Campus 51 Akoranga Rd, Hamilton</td>
<td>Novotel Tainui Hamilton / Ibis Hamilton Victoria Street, in loading bay between Novotel and BNZ Bank</td>
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<tr>
<td><strong>Departs Wintec to College Hall</strong></td>
<td>7.30pm</td>
<td>8.00pm</td>
<td>Wintec - Rotokauri Campus 51 Akoranga Rd, Hamilton</td>
<td>College Hall, Gate 4, University of Waikato Hillcrest Road, Hamilton</td>
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<tr>
<td><strong>Tuesday 11 December</strong></td>
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<tr>
<td><strong>Hobbiton Conference Dinner</strong></td>
<td>4.45pm</td>
<td>5.45pm</td>
<td>University of Waikato Bus stop outside shops, Gate 1, University of Waikato, Knighton Road</td>
<td>Hobbiton 501 Buckland Road, Hinuera</td>
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<tr>
<td><strong>Depart Hobbiton to Host Hotels</strong> (i.e. Novotel/Ibis, College Hall)</td>
<td>10.00pm</td>
<td>11.00pm</td>
<td>Hobbiton Movie Set 501 Buckland Road, Hinuera</td>
<td>College Hall, Gate 4, University of Waikato Hillcrest Road, Hamilton then to Novotel Tainui/Ibis Hamilton, Victoria Street, in loading bay between Novotel and BNZ Bank</td>
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<td><strong>Depart Hobbiton to Host Hotels</strong> (i.e. Novotel/Ibis, College Hall)</td>
<td>10.30pm</td>
<td>11.30pm</td>
<td>Hobbiton Movie Set 501 Buckland Road, Hinuera</td>
<td>College Hall, Gate 4, University of Waikato Hillcrest Road, Hamilton then to Novotel Tainui/Ibis Hamilton, Victoria Street, in loading bay between Novotel and BNZ Bank</td>
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<tr>
<td><strong>Depart Hobbiton to Host Hotels</strong> (i.e. Novotel/Ibis, College Hall)</td>
<td>11.00pm</td>
<td>Midnight</td>
<td>Hobbiton Movie Set 501 Buckland Road, Hinuera</td>
<td>College Hall, Gate 4, University of Waikato Hillcrest Road, Hamilton then to Novotel Tainui/Ibis Hamilton, Victoria Street, in loading bay between Novotel and BNZ Bank</td>
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KEYNOTE SPEAKERS

PROFESSOR DONNA RILEY

Professor Donna Riley is Kamyar Haghighi Head and Professor in the School of Engineering Education at Purdue University. Prior to taking on this role in 2017, Dr Riley was Professor and Interim Head in the Department of Engineering Education at Virginia Tech. From 2013-2015, she served as Program Director for Engineering Education at the National Science Foundation (NSF). Riley spent thirteen years as a founding faculty member of the Picker Engineering Program at Smith College, the first engineering program at a U.S. women’s college.

In 2005, she received a NSF CAREER award on implementing and assessing pedagogies of liberation in engineering classrooms.

Dr Riley is the author of two books, Engineering and Social Justice and Engineering Thermodynamics and 21st Century Energy Problems, both published by Morgan and Claypool. Riley served a two-year term as Deputy Editor of the Journal of Engineering Education (2012-2014), rotated through the leadership of the Liberal Education/Engineering and Society (LEES) Division of the American Society for Engineering Education (ASEE) (2007-2011), and currently serves on the ASEE Diversity Committee. She is the recipient of the 2016 Alfred N. Goldsmith Award from the IEEE Professional Communications Society, the 2012 Sterling Olmsted Award from ASEE, the 2010 Educator of the Year award from the National Organization of Gay and Lesbian Scientists and Technical Professionals (NOGLSTP), and the 2006 Benjamin Dasher Award from Frontiers in Education.

Dr Riley earned a B.S.E. in chemical engineering from Princeton University and a Ph.D. from Carnegie Mellon University in Engineering and Public Policy. She is a fellow of the American Society for Engineering Education.

ABSTRACT

Accountability for Diversity: Addressing Power and Privilege in Engineering Education

As we seek to account for diversity in our practice as engineering educators, we might ask why, after decades of research and educational innovation, engineering continues to struggle to achieve diversity, equity, and inclusion by most measures. Why is change so slow, despite numerous investments from governments, industries, and non-governmental organizations? Identifying and examining root causes of inequality in engineering disciplines, we can reframe our approach to diversity in order to make greater progress. Re-imagining diversity as social justice generates numerous avenues of inquiry and critique, creates space for multiple intersecting identities and experiences, and moves us from gritty survival amid structural inequality, to envisioning new structures for a broad, resilient engineering community in which all can thrive, and from which all can benefit.
PROFESSOR RICHARD COLL

Professor Richard K. Coll is currently Deputy Vice Chancellor – Learning teaching and Student Services at the University of the South Pacific.

He holds a PhD in Chemistry from Canterbury University and a Doctor of Science Education from Curtin.

He previously worked as a chemistry and education lecturer at Waikato University in Hamilton, New Zealand, and was Vice-Chancellor at the University of Fiji before taking up his current post.

ABSTRACT

Engineering Education in the Pacific: Managing Quality and Diversity

The University of the South Pacific in its 50th year of operation has an impressive record of educational achievement, and is the premier provider of higher education in the region. The University has in recent years strived to achieve academic excellence, with a strong focus on quality, evidenced by international accreditation of its academic programs, including engineering (through IPENZ). At the institutional level, the University recently attained accreditation from the Western Association of Schools & Colleges: Senior Colleges & Universities Commission (WSCUC). How does the University maintain quality, when operating in an environment characterized by ethnic and cultural diversity? Meeting the needs of its diverse client base forms the basis of this presentation, along with description of work-integrated learning, and other quality and inclusiveness measures the University employs in education including engineering education.
Professor Angus Hikairo Macfarlane (Ngāti Whakaue) is Professor of Māori Research at the University of Canterbury (UC), and Director of Te Rū Rangahau, the Māori Research Laboratory. His research focuses on exploring Indigenous and sociocultural imperatives that influence education and psychology. Avid about Indigenous advancement, he has pioneered several theoretical frameworks associated with culturally-responsive approaches for professionals working across the disciplines.

Professor Macfarlane’s prolific publication portfolio and exemplary teaching abilities have earned him national and international standing in his field of scholarship. In 2010, he received the Tohu Pae Tawhiti Award from the New Zealand Council for Educational Research for outstanding contributions to Māori research over an extended period of time. In 2013, he was the first Māori recipient of the University of Canterbury Research Medal – the highest honour that the UC Council can extend to its academic staff.

In 2015, he received the national Ako Aotearoa Tertiary Teaching Excellence Award for specialist services in the field of kaupapa Māori. Last year the UCSA awarded him the Supervisor of the Year title for his exceptional mentoring of postgraduate scholars whose interests include exploring cultural diversity and its dynamic features from the past, the present, and into the future.

Professor Macfarlane has recently been made a Fellow of the Royal Society of New Zealand.

ABSTRACT

Totū te mātauranga: Repositing the emphasis

This presentation introduces a framework, He Awa Whiria, within which a culturally-inclusive process and a set of guidelines are described, explained and proposed for application for evidence-based teaching that is challenging, yet manageable in the pedagogical space. One of the objectives of the presentation is to propose building an acceptance of diversity in the teaching and learning space through considering knowledge systems to shift thinking from a ‘one stream’ paradigm - where mainstream dominant knowledge has reigned - to a to a ‘two stream’ approach where Māori knowledge (mātauranga Māori) has a rightful place of equal status. This work should not be seen as being an approach that is exclusive of other cultures or worldviews as it also provides a platform for other cultural paradigms to be considered and included. Importantly and significantly, however, this framework acknowledges that kaupapa Māori (Indigenous philosophy) has an integrity of its own.
ASSOCIATE PROFESSOR SONJA HERAHINE MACFARLANE

Associate Professor Sonja Herahine Macfarlane (Ngāi Tahu; Ngāti Waewae) is an Associate Professor (Senior Research Fellow) at University of Canterbury (UC), and Co-Director of Te Rū Rangahau, the Māori Research Laboratory. Her research, publications and teaching collectively focus on culturally responsive evidence-based approaches in education, psychology, counselling and human development.

Sonja is passionate about social justice, equity and human rights, and contributing to Māori advancement. Her work has been widely published in leading research journals, both nationally and internationally. In 2017, Sonja received the Tohu Pae Tawhiti Award from the New Zealand Council for Educational Research (NZCER) for her outstanding contributions to Māori research over many years.

In that same year, she was the member of a team that received the Research Team Award conferred by UC’s College of Education, Health and Human Development. In 2015, she was a co-recipient of the CLNZ Education Award “Best Resource in Higher Education”, and in 2014 was the recipient of a UC Research Excellence Award. Sonja is a member of the New Zealand Psychological Society, as well as a research and advisory member on several ministerial-funded projects and advisory boards.
## PROGRAMME

### Sunday 9 December 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Venue</th>
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<tbody>
<tr>
<td>4.30pm</td>
<td>Registration Opens</td>
<td>Wintec, Rotokauri Campus</td>
</tr>
<tr>
<td>5.00pm – 7.30pm</td>
<td>Pōwhiri and Welcome Function</td>
<td>G-Block Foyer, Wintec, Rotokauri Campus, Hamilton</td>
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All conference sessions from Monday 10 to Wednesday 12 December will take place at University of Waikato, Hamilton.

### Monday 10 December 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Venue</th>
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<tbody>
<tr>
<td>8.00am</td>
<td>Registration Opens</td>
<td>Ground Level Foyer, S Block, University of Waikato</td>
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<tr>
<td>8.30am – 10.30am</td>
<td>Conference Opening and Plenary Session 1</td>
<td>L.G.01, L Block, University of Waikato</td>
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<tr>
<td></td>
<td>Chair: Janis Swan and Trudy Harris</td>
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<tr>
<td>8.30am – 8.50am</td>
<td>Welcome to Country - Mihi Whakatau</td>
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<tr>
<td>8.50am – 8.55am</td>
<td>Vice Chancellor (University of Waikato)</td>
<td>Neil Quigley</td>
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<tr>
<td>9.00am – 9.05am</td>
<td>Welcome by Conference Chair</td>
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<tr>
<td>9.10am – 10.05am</td>
<td>Totūte mātauranga: Repositioning the emphasis</td>
<td>Angus Macfarlane</td>
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<tr>
<td>10.05am – 10.15am</td>
<td>AAEE President Address</td>
<td>Tom Goldfinch</td>
</tr>
<tr>
<td>10.15am – 10.25am</td>
<td>Engineering Futures 2035</td>
<td>Doug Hargreaves</td>
</tr>
<tr>
<td>10.25am – 10.30am</td>
<td>Group Photo</td>
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</tr>
<tr>
<td>10.30am – 11.00am</td>
<td>Morning Tea and Exhibition</td>
<td>Upper Foyer, S Block</td>
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</table>
### Parallel Sessions

<table>
<thead>
<tr>
<th>Time</th>
<th>Session Details</th>
</tr>
</thead>
</table>
| 11.00am – 11.10am | **Parallel Session 1A**  
**Venue:** S.1.02  
**Chair:** Sally Male  
Faculty attitudes towards integrated engineering as a concept and a curriculum.  
Tom Goldfinch, J Vulic, K Willey, G Miao, R Fiford, A Hadigheh  
**Parallel Session 1B**  
**Venue:** S.1.03  
**Chair:** Steven Goh  
Connection to country: Building a connection to Indigenous knowledges in engineering education.  
Jennifer Turner, A Burt, L Mann  
**Parallel Session 1C**  
**Venue:** S.1.04  
**Chair:** Matthew Hughes  
Enhancing innovation and entrepreneurial competencies of engineering students through a systematic innovation learning course.  
Pavel Livotov  |
| 11.10am – 11.20am | **Parallel Session 1D**  
**Venue:** SB.2  
**Chair:** Rosalie Goldsmith, Keith Willey  
Using practice architectures theory to support writing practices in the engineering curriculum.  
A new higher education curriculum model to meet the needs of the Civil Construction industry.  
A Irvine, J Irvine, A Mihailidou, B Thong Tan, S Worley  
**Workshop 1E**  
**Venue:** S.1.05  
**Chair:** Bernadette Foley  
Embedding a Management System for Engineering Education into the curriculum.  
Bernadette Foley, J Gill, E Palmer, S Eglin, R Yee, B Senadji, F Soh, E Martinez-Marroquin  |
| 11.20am – 11.30am | **Parallel Session 2A**  
**Venue:** S.1.06  
**Chair:** Andrew Rose  
Designing an on-country engineering education experience in collaboration with the Gunditjmara community.  
Juliana Kanya Prpic, Domelin Bell  
**Parallel Session 2B**  
**Venue:** S.1.07  
**Chair:** Bernadette Foley  
A new higher education curriculum model to meet the needs of the Civil Construction industry.  
A Irvine, J Irvine, A Mihailidou, B Thong Tan, S Worley  
**Workshop 2C**  
**Venue:** SJ.2  
**Chair:** Cat Kutay  
Cross-cultural construction engineering with aboriginal communities.  
Cat Kutay, B Gunoy, C Tobin  |
| 11.30am – 11.40am | **Parallel Session 3A**  
**Venue:** S.1.08  
**Chair:** Roger Hadgraft  
Reflections on a large curriculum change project.  
Roger Hadgraft, J Lowson, R Lamman  
**Parallel Session 3B**  
**Venue:** S.1.09  
**Chair:** Cat Kutay  
How we tell our engineering stories.  
Cat Kutay, Elysseith Leigh  
**Workshop 3C**  
**Venue:** SJ.2  
**Chair:** Veronica Halupka  
Diversity games that highlight the importance of diversity and collaboration for engineering and project management students.  
Ehassan Sokhate, R Eymont  |
| 11.40am – 11.50am | **Parallel Session 4A**  
**Venue:** S.1.10  
**Chair:** Cat Kutay  
Aligning curriculum for the needs of the Civil Construction industry.  
Lim Jen Nee Jones, Mismadi, B Thong Tan, S Worley  
**Parallel Session 4B**  
**Venue:** S.1.11  
**Chair:** Cat Kutay  
Aligning learning outcomes and assessment.  
Cat Kutay, Elysseith Leigh  
**Workshop 4C**  
**Venue:** S.1.12  
**Chair:** Veronica Halupka  
Consolidating alignment, mapping, and curriculum design.  
Veronica Halupka, J Lombran  |

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Monday 10 December
<table>
<thead>
<tr>
<th>Time</th>
<th>Parallel Sessions</th>
<th>Discussion</th>
<th>Reflections on a large ALOhA! Aligning learning and curriculum change</th>
<th>Lunch and Exhibition</th>
</tr>
</thead>
<tbody>
<tr>
<td>11.40am – 11.50am</td>
<td>Understanding the feasibility of micro-credentials in engineering education&lt;sup&gt;10&lt;/sup&gt; <strong>Brenden Mischewski, A Christie</strong></td>
<td>He Toki engineering leaders&lt;sup&gt;171&lt;/sup&gt; <strong>A Te Whetu, Kym Hamilton, E Tarena</strong></td>
<td>Developing critical thinking and intellectual design skills via collaborative projects in engineering and business postgraduate studies&lt;sup&gt;93&lt;/sup&gt; <strong>Mahyar Shirvanimoghaddam</strong></td>
<td>Wings and Exhibitions</td>
</tr>
<tr>
<td>11.50am – 12.00pm</td>
<td>Using micro-credentials to improve Pasifika participation in engineering education&lt;sup&gt;80&lt;/sup&gt; <strong>Neel Pandey, L Falem’a’a</strong></td>
<td>Strategies for promoting cultural diversity within student laboratory groups in an engineering degree course at an Australian University&lt;sup&gt;32&lt;/sup&gt; <strong>S Jaikaran-Doe, B León de la Barra, S Lyden, I Wang, F Fan, A Henderson, E Franklin, Peter Doe</strong></td>
<td>Enhancing students’ reflections in performance planning and review subjects&lt;sup&gt;86&lt;/sup&gt; <strong>Reza Mahinroosta, J Devitt</strong></td>
<td>Wings and Exhibitions</td>
</tr>
<tr>
<td>12.00pm – 12.30pm</td>
<td>Discussion</td>
<td>Discussion</td>
<td>Discussion</td>
<td>Wings and Exhibitions</td>
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<tr>
<td>12.30pm – 1.30pm</td>
<td>Lunch and Exhibition</td>
<td>Discussion</td>
<td>Discussion</td>
<td>Wings and Exhibitions</td>
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### Parallel Sessions

**Venue: Upper Foyer, S Block**

**1.30pm – 3.00pm**

<table>
<thead>
<tr>
<th>Parallel Session 2A</th>
<th>Parallel Session 2B</th>
<th>Parallel Session 2C</th>
<th>Workshop 2D</th>
</tr>
</thead>
<tbody>
<tr>
<td>Venue: S.1.02</td>
<td>Venue: S.1.03</td>
<td>Venue: S.1.04</td>
<td>Venue: SB.2</td>
</tr>
<tr>
<td>Chair: Mohammad Al-Rawi</td>
<td>Chair: Neel Pandey</td>
<td>Chair: Anne Gardner</td>
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**1.30pm – 1.40pm**

<table>
<thead>
<tr>
<th>Session 2A</th>
<th>Session 2B</th>
<th>Session 2C</th>
<th>Workshop 2D</th>
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</thead>
<tbody>
<tr>
<td>Using census data to better understand engineering occupational outcomes&lt;sup&gt;12&lt;/sup&gt; <strong>Stuart Palmer, M Campbell</strong></td>
<td>A framework for promoting diverse voices in the design cycle&lt;sup&gt;166&lt;/sup&gt; <strong>Ellen Lynch, C Browne</strong></td>
<td>Effectiveness of first year mentoring program on increasing student sense of belonging and correlation with motivation&lt;sup&gt;137&lt;/sup&gt; <strong>Charles Hoke, W Smith, K Wilson</strong></td>
<td>Design factory New Zealand: A co-creation space where students work in multidisciplinary teams with industry partners to solve complex problems&lt;sup&gt;157&lt;/sup&gt; <strong>Elna Fourie, Aidan Bigham</strong></td>
</tr>
</tbody>
</table>
1.40pm – 1.50pm
Rethinking progression of engineering students: Influential factors
Xiaobo Zhao, F Martin

1.50pm – 2.00pm
Employer and lecturer perceptions of science and engineering graduate competencies: Implications for curricular and pedagogical practice
Elaine Khoo, K Zegwoord, A Adam

2.00pm – 2.10pm
Reflective practice in continuous professional development
Thanh Nguyen, M Bevis, J Lamborn

2.10pm – 2.20pm
A novel approach to professional empowerment of engineers
P Cebon, Juliana Kaya Prpik, A Ooi

2.20pm – 2.30pm
A numerical unhappiness function for allocating cadet engineers to placement positions
E Lindsay, Reza Mahroosta

2.30pm – 3.00pm
Discussion

Monday 10 December
<table>
<thead>
<tr>
<th>Time</th>
<th>Title</th>
<th>Venue</th>
<th>Speakers</th>
</tr>
</thead>
<tbody>
<tr>
<td>3.00pm – 3.30pm</td>
<td>Afternoon Tea and Exhibition</td>
<td>S Block</td>
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<tr>
<td></td>
<td><strong>Workshop 3A</strong></td>
<td>S.1.02</td>
<td>Xianbo Zhao, J Pienaar, F Martin</td>
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<tr>
<td></td>
<td><strong>Workshop 3B</strong></td>
<td>S.1.03</td>
<td>Anuroop Gaddam, K Lundqvist</td>
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<td><strong>Workshop 3C</strong></td>
<td>SB.02</td>
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<tr>
<td>3.30pm – 5.00pm</td>
<td>Beyond the qualification – a guided self-assessment for future-proofing engineering education for a diverse workforce</td>
<td>S.1.02</td>
<td>Natalie Lloyd, Eva Cheng, Art Agrawal</td>
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<td>Implementing virtual work integrated learning</td>
<td>S.1.03</td>
<td>Sally Male, David Pointing, Doug Hargreaves</td>
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<td></td>
<td>Engineering futures 2035</td>
<td>SB.02</td>
<td>C Crosthwaite, D Hargreaves, J Wilson, P Lee, B Foley, I Burnett, T Goldfinch, Mark Symes</td>
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<td>3.30pm – 3.00pm</td>
<td>Discussion</td>
<td>SB.02</td>
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# Tuesday 11 December 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
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<tbody>
<tr>
<td><strong>7.30am</strong></td>
<td>Registration Opens</td>
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<tr>
<td></td>
<td>Venue: Downstairs Foyer, S Block, University of Waikato</td>
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<tr>
<td><strong>8.00am - 9.30am</strong></td>
<td>Parallel Sessions</td>
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<tr>
<td></td>
<td><strong>Parallel Session 4A</strong></td>
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<tr>
<td></td>
<td>Venue: S.1.02</td>
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<tr>
<td></td>
<td>Chair: Maryam Moridnejad</td>
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<td><strong>Parallel Session 4B</strong></td>
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<td>Venue: S.1.03</td>
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<td>Chair: Mark Symes</td>
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<td><strong>Parallel Session 4C</strong></td>
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<td>Venue: S.1.04</td>
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<td>Chair: David Lowe</td>
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<td><strong>Workshop 4D</strong></td>
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<td>Venue: SB.2</td>
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<tr>
<td><strong>8.00am - 8.10am</strong></td>
<td>Development of student confidence for academic success²³</td>
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<td><em>Aaron Blicblau</em></td>
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<tr>
<td><strong>8.10am - 8.20am</strong></td>
<td>One step ahead of national strategy: Integrating global competence in engineering education¹⁷⁷</td>
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<td><em>Björn Kjellgren, E Keller</em></td>
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<tr>
<td><strong>8.20am - 8.30am</strong></td>
<td>Reducing software engineers’ “Fear of the large”¹²⁷</td>
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<td><em>Chris McDonald</em></td>
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<tr>
<td><strong>8.00am - 9.30am</strong></td>
<td>Validating storytelling for indigenous knowledge teaching¹⁵²</td>
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<td><em>Cat Kutay, Elysebeth Leigh</em></td>
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<tr>
<td><strong>8.00am - 8.10am</strong></td>
<td>Visually exploring sentiment and keywords for analysing student satisfaction data³³</td>
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<td><em>Samuel Cunningham-Nelson, M Baktashmotlaga, W Boles</em></td>
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<tr>
<td><strong>8.00am - 9.30am</strong></td>
<td>Demystifying contemporary learner engagement: CQUniversity Engineering¹¹²</td>
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<td><em>Arun Jayasuriya, F Martin, B Taylor</em></td>
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<tr>
<td><strong>8.10am - 8.20am</strong></td>
<td>Exploring the student experience of industry placements using sentiment analysis⁹⁶</td>
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<td><em>Melanie Fleming, B Coulter, S Weaver</em></td>
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<tr>
<td><strong>8.20am - 8.30am</strong></td>
<td>Improving student engagement, experience and performance through experiential learning in a first year Engineering Mechanics course⁹⁹</td>
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<td><em>Shanmuganathan Gunaalan, B Gilbert, H Guan, H Karampour, J Crough</em></td>
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<tr>
<td><strong>8.00am - 9.30am</strong></td>
<td>Assessment of engineering professional skills through EPSA rubric class administrations⁹¹</td>
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<td><em>Hadisantono Hadisantono, G Rowe, N Giacaman</em></td>
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<td>Time</td>
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<tr>
<td>8.30am – 8.40am</td>
<td>Complexity makes me feel incompetent and it’s your fault⁶³</td>
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<td>Feedback approach and its effectiveness; finding a new way to utilize the feedback more effectively in undergraduate engineering studies¹⁶³</td>
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<td>Creative engineering graduates – developing diverse thought³⁷</td>
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<tr>
<td>8.40am – 8.50am</td>
<td>Can one class hour improve creative problem solving self-efficacy¹⁷³</td>
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<td>Towards deterring contract cheating; Stimulating students’ motivation through authentic assessment design¹⁶⁷</td>
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<td>Lessons learned: Understanding online engagement satisfaction in a large postgraduate Information Assurance Principles (IAP) course⁶⁸</td>
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<tr>
<td>8.50am – 9.00am</td>
<td>Human-centrics and design thinking in engineering practice²⁸</td>
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<td>Discussion</td>
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<tr>
<td>9.00am – 9.30am</td>
<td>Discussion</td>
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<tr>
<td>9.30am – 10.00am</td>
<td>Morning Tea and Exhibition</td>
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Tuesday 11 December
<table>
<thead>
<tr>
<th>Time</th>
<th>Session/Panel</th>
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</thead>
</table>
| 10.00am – 11.30am | Plenary Session 2  
Venue: L.G.01, L Block  
Chair: Tom Goldfinch                                                                 |
| 10.00am – 10.45am | Accountability for Diversity: Addressing Power and Privilege in Engineering Education  
*Donna Riley - Fullbright Scholar* |
| 10.45am – 11.30am | Panel Discussion:  
*Donna Riley*  
*Sonja Macfarlane*  
*Richard Coll*  
*Sheryl Sorby* |
| 11.30am – 12.30pm | Lunch and Exhibition  
Venue: Upper Foyer, S Block  
*AAEE Annual General Meeting*  
Venue: S.1.02 |
| 12.30pm – 2.00pm | Parallel Sessions  
Parallel Session 5A  
Venue: S.1.02  
Chair: Gerard Rowe  
Parallel Session 5B  
Venue: S.1.03  
Chair: Chris Whittington  
Parallel Session 5C  
Venue: S.1.04  
Chair: Colin Kestell |
| 12.30pm – 12.40pm | ATAR, prior knowledge and performance in idea generation  
*Gavin Buskes, I Belski*  
Evaluating the impact of the YoWIE summer school on girls’ perception of engineering  
*Toby Boyson*  
A heutagogical approach for teaching a numerical analysis subject in engineering  
*Peter To, R Tuladhar* |
| 12.40pm – 1.00pm | If I don’t have a language to discuss and think about it then it’s not part of my reality  
*Keith Willey, A Gardner*  
Spatial skills and problem solving: Comparing low and high visualisers across genders in chemical engineering  
*Grace Panther, S Sorby*  
Regular and automatic feedback of concepts as formative assessment  
*Samuel Cunningham-Nelson, M Mukherjee, A Goncher, W Boles*  
Creativity in mechanical design: The use of visually diverse ethnography methodologies for better practice  
*Paul Briozzo, R Fiford* |

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81 Gavin Buskes, I Belski
82 Toby Boyson
83 Keith Willey, A Gardner
84 Grace Panther, S Sorby
85see footnote
86see footnote
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90see footnote
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<table>
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<th>Time</th>
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<th>Title</th>
<th>Authors</th>
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</thead>
<tbody>
<tr>
<td>1.00pm – 1.10pm</td>
<td>Individual student assessment in team projects: A team charter approach</td>
<td>Capstone mechanical engineering design project – develop an interactive ball run display as STEM activity for the Waikato Museum</td>
<td>Nirmal Mandal, Shen Hin Lim, P Higgins, R Jangali, G Neshausen</td>
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<td>29th Australasian Association for Engineering Education Annual Conference (AAEE 2018)</td>
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### Wednesday 12 December 2018

<table>
<thead>
<tr>
<th>Time</th>
<th>Event</th>
<th>Venue</th>
<th>Chair/Presenter</th>
</tr>
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<tr>
<td>8.00am</td>
<td>Registration Opens</td>
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</tr>
<tr>
<td>9.00am – 9.45am</td>
<td>Plenary Session 3</td>
<td>Venue: L.G.01, L Block</td>
<td>Richard Coll</td>
</tr>
<tr>
<td>9.45am – 10.15am</td>
<td>Morning Tea and Exhibition</td>
<td>Venue: Upper Foyer, S Block</td>
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<tr>
<td>10.15am – 11.45pm</td>
<td>Parallel Sessions</td>
<td></td>
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</tr>
<tr>
<td>10.15am – 10.25am</td>
<td>Parallel Session 7A</td>
<td>Venue: S.1.02</td>
<td>Roger Hadgraft</td>
</tr>
<tr>
<td>10.25am – 10.35am</td>
<td>Parallel Session 7B</td>
<td>Venue: S.1.03</td>
<td>Aidan Bigham</td>
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<tr>
<td>10.15am – 10.25am</td>
<td>Identifying students’ procedural and conceptual difficulties with mathematics</td>
<td>Nigel Shepstone</td>
<td></td>
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<tr>
<td>10.25am – 10.35am</td>
<td>Strategies for teaching engineering mathematics</td>
<td>Maree Lake, N Lake, R Vasquez Padilla</td>
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</tr>
<tr>
<td>10.15am – 10.25am</td>
<td>Experiencing disability: A preliminary analysis of professional identity development in U.S. undergraduate civil engineering students</td>
<td>Cassandra Groen-McCall, L McNair, M Paretti, A Shew, D Simmons</td>
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<tr>
<td>10.25am – 10.35am</td>
<td>Recognising diversity in the improvement of educational practice</td>
<td>Colin Kestell</td>
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</tr>
<tr>
<td>11.00am – 12.30pm</td>
<td>How to maintain the conversation, group work and peer assessment when a modest post-graduate course goes big</td>
<td>Navid Haghdadi, I MacGill</td>
<td></td>
</tr>
<tr>
<td>11.00am – 12.30pm</td>
<td>Technology-enabled international joint courses</td>
<td>Ang Liu, Yun Dai, S Lu, A Trowbridge</td>
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</table>

**Chair:** Janis Swan

**Venue:** Downstairs Foyer, S Block, University of Waikato

**Venue:** L.G.01, L Block

**Venue:** S.1.02

**Venue:** S.1.03

**Venue:** S.1.04

**Venue:** SB.2
<table>
<thead>
<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Presenters</th>
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<tbody>
<tr>
<td>10.35am – 10.45am</td>
<td>Teaching Physics concepts without (much) mathematics: View through a concept-index, threshold-concept lens</td>
<td>Reflecting on our own learning: Incorporating diverse worldviews into teaching and learning activities</td>
<td>M Wilson, L Streeter, S Seshadri, Jonathan Scott, Mohammad Al-Rawi, J Khanna, A Lazonby</td>
</tr>
<tr>
<td>10.45am – 10.55am</td>
<td>Mathematics in a practice-based course: Entry requirements and diversity</td>
<td>Understanding student absenteeism in undergraduate engineering programmes</td>
<td>Emily Cook, Chris Whittington, T Anderson, R Nates, S Bakrania, Mohammad Al-Rawi, J Khanna, A Lazonby</td>
</tr>
<tr>
<td>10.55am – 11.05am</td>
<td>A new learning environment through improved learning objectives in an introductory solid mechanics course</td>
<td>A human centred design ‘makerthon’: The creation of a framework for teaching humanitarian engineering competencies</td>
<td>Christopher McGann, Wenqian Gan, R Fiford, N Brown, S Perkins, C Wong, Mohammad Al-Rawi, J Khanna, A Lazonby</td>
</tr>
<tr>
<td>11.05am – 11.15am</td>
<td>Discussion</td>
<td>Developing awareness of stakeholders: Contrasting professional ethics education in engineering and medicine</td>
<td>Iain Skinner, A Torda, Mohammad Al-Rawi, J Khanna, A Lazonby, E Hakansson, H Namik, Febelyn Reguyal, C Toma</td>
</tr>
<tr>
<td>11.15am – 11.45am</td>
<td>Discussion</td>
<td>Redesign of first year ‘Principles of Engineering Design’ course</td>
<td>Mohammad Al-Rawi, J Khanna, A Lazonby, E Hakansson, H Namik, Febelyn Reguyal, C Toma</td>
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<tr>
<td>Time</td>
<td>Session</td>
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<tr>
<td>11.45am – 12.45pm</td>
<td>Lunch and Exhibition</td>
<td>Upper Foyer, S Block</td>
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<tr>
<td>12.45pm – 2.25pm</td>
<td>Parallel Sessions 8A</td>
<td>S.1.02</td>
<td>Robert Dantzer</td>
</tr>
<tr>
<td>12.45pm – 2.25pm</td>
<td>Parallel Session 8B</td>
<td>S.1.03</td>
<td>Prue Howard</td>
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<tr>
<td>1.30pm – 3.00pm</td>
<td>Parallel Session 8C</td>
<td>S.1.04</td>
<td>Graham Town</td>
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<tr>
<td>12.55pm – 1.05pm</td>
<td>Workshop 8D</td>
<td>SB.2</td>
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<td>Parallel Session 8C</td>
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<td>1.05pm – 1.15pm</td>
<td>Workshop 8D</td>
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**Wednesday 12 December**
<table>
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<tr>
<th>Time</th>
<th>Session</th>
<th>Title</th>
<th>Authors</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.15pm – 1.25pm</td>
<td>A computer-assisted, personalized approach for efficient evaluation of large-scale assessment applications 82</td>
<td>Future proofing engineers through embedded systems design 75</td>
<td>D Preethichandra, U Izhar</td>
</tr>
<tr>
<td></td>
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<td>Fostering project management competencies in undergraduate engineering: An exploration of the use of management-educated tutors as coaches in problem-based learning 57</td>
<td>Elaine Khoo, Jonathan Scott, D McKie, Bronwen Cowie</td>
</tr>
<tr>
<td></td>
<td>A computer-assisted, personalized approach for efficient evaluation of large-scale assessment applications 82</td>
<td>Future proofing engineers through embedded systems design 75</td>
<td>D Preethichandra, U Izhar</td>
</tr>
<tr>
<td></td>
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<td>Fostering project management competencies in undergraduate engineering: An exploration of the use of management-educated tutors as coaches in problem-based learning 57</td>
<td>Elaine Khoo, Jonathan Scott, D McKie, Bronwen Cowie</td>
</tr>
<tr>
<td>1.25pm – 1.35pm</td>
<td>Diverse students and lecture recording technology: Can lecture recording replace lectures? 180</td>
<td>Pedagogy, practice, participation: Reimagining edtech onboarding 124</td>
<td>Sharanya Yoganathan, N Sherburn, V Halupka, J Li</td>
</tr>
<tr>
<td></td>
<td></td>
<td>The future of intelligent education is not artificial 18</td>
<td>Rudolf Zettler</td>
</tr>
<tr>
<td>1.35pm – 1.45pm</td>
<td>Thinking outside of the (Augmented Reality Sand) box 28</td>
<td>Articulation of Chinese students into an Australian engineering degree 76</td>
<td>S Jaikaran-Doe, Sarah Lyden, Peter Doe</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Core Concepts and Challenges in Sustainable Engineering Education in Australia 179</td>
<td>Michele Rosano, J Scott, B Cowie</td>
</tr>
<tr>
<td>1.45pm – 1.55pm</td>
<td>An investigation on learning fundamental structural concepts and practical evaluation of e-learning through the platform Xorro-Q 168</td>
<td>Can we select students who will go on to be successful engineers 105</td>
<td>Enda Crossin, J Dohaney</td>
</tr>
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<td></td>
<td></td>
<td>Students as partners: developing a dialogue for change 42</td>
<td>Melanie Fleming, L Kavanagh, C Reidsema, A Waris, M Lee, S Liu, R Kara-Manning</td>
</tr>
<tr>
<td>1.55pm – 2.25pm</td>
<td>Discussion</td>
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<td>2.25pm – 3.10pm</td>
<td>Venue: S.1.04</td>
<td>Conference Closing</td>
<td>Presentation of Best Paper and Best Reviewer Awards</td>
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<td>Conference Closing</td>
<td>Closing Remarks and AAEE 2019 Handover</td>
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<tr>
<td>Time</td>
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<tr>
<td>8.00am-8.30am</td>
<td>Associated Deans Teaching and Learning (ADTL) workshop</td>
<td>SB.02, University of Waikato, Hamilton</td>
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<tr>
<td>9.00am</td>
<td>Indigenous People Workshop</td>
<td>G Block, level 1f, Room K2.4, Wintec, Rotokauri Campus, Hamilton</td>
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</table>
EXHIBITION FLOOR PLAN
## SPONSORSHIP AND EXHIBITOR LISTING

<table>
<thead>
<tr>
<th>Organisation</th>
<th>Sponsorship</th>
<th>Stand Number</th>
</tr>
</thead>
<tbody>
<tr>
<td>The University of Waikato</td>
<td>Platinum Sponsor</td>
<td>5</td>
</tr>
<tr>
<td>e2e Engineering Education to Employment</td>
<td>Bronze Sponsor</td>
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<tr>
<td>EduTechnics</td>
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<td>4</td>
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<tr>
<td>Elsevier</td>
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<td>3</td>
</tr>
<tr>
<td>MathWorks</td>
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<tr>
<td>Newberry Technology</td>
<td></td>
<td>2</td>
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</tbody>
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SPONSOR AND EXHIBITOR CATALOGUE

THE UNIVERSITY OF WAIKATO

Stand 5
PLATINUM CONFERENCE PARTNER

Contact: engineering@waikato.ac.nz

The University of Waikato offers future-proofed, project-based learning that will put you at the top of your game for a career in engineering.

Our eligible engineering programmes are fully accredited by Engineering New Zealand and internationally recognised so that our graduates can work just about anywhere in the world.

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The School of Engineering boasts a number of world-class facilities, such as the Large Scale Lab that features a suite of equipment dedicated to engineering teaching and research, including 3D printers, a mechanical workshop and computer labs.

The School of Engineering together with the School of Science (the Faculty of Science and Engineering) and the Faculty of Computer and Mathematical Sciences at the University of Waikato, form a cohesive cross-disciplinary unit, providing wider opportunities in teaching, research and innovation. We offer flexible programmes that produce multi-skilled, adaptable graduates who are ready for the challenges of today and have the skills to tackle the obstacles of tomorrow.

E2E ENGINEERING EDUCATION TO EMPLOYMENT

BRONZE CONFERENCE PARTNER

T: +64 4 462 5166
E: angela.christie@tec.govt.nz
W: engineeringe2e.org.nz
Contact: Angela Christie

Set up by the Government in 2014 and managed by the Tertiary Education Commission (TEC), Engineering e2e’s task is to find ways to draw more students into tertiary study in engineering. To help achieve this, we have identified six key initiatives for the next two years. They include micro-credentials, increasing the number of Māori engineers, a degree apprenticeship, secondary-tertiary pathways, graduate capability, and engineering education hubs. Our systems integration approach involves consultation and research to ensure our decisions and actions are fit for purpose. We offer funding and support to make sure initiatives we put in place have the best chance of success.
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Stand 2

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Contact: Deb Newberry

Newberry Technologies provides coaching, workshops and consulting services helping to integrate nanotechnology, photonics and biotechnology into educational content. Training is offered to support the interaction between industry and educators – translating industry requirements into student competencies.
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Dr Trudy Harris  Wintec
Dr Mohammad Al-Rawi  Wintec
Dr Bronwen Cowie  The University of Waikato
Dr Elaine Khoo  The University of Waikato
Dr Mark Lay  The University of Waikato
Brent Philips  Wintec

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Dr Cat Kutay  The University of Technology Sydney
Dr Shen Hin Lim  University of Waikato
Prof Pavel Livotov  Offenburg University
Assoc Prof Natalie Lloyd  University of Technology Sydney
VENUE FLOOR PLAN

Floor plans

S Block
Ground floor

SB.02 via stairs

Lift

S Block
First floor

SG.01

Foyer

REGISTRATION

LG.01

S1.01
SG.03 (Downstairs)

S1.02

S1.03

S1.04

S1.05

Toilets

Tech support

Stair to Ground floor